

REMARKS

This is in response to the Office Action dated March 5, 2008. Applicant has amended the application as set forth above. In specific, Claims 1-2 have been amended. Applicant has deleted reference numerals from Claims 1-2 and enclosed a clean version of the Claim Amendment to help expedite the transaction steps. All the features of the amended claims are fully supported by the originally filed application including the original claims. Thus, the amendments do not add new matter to the application. Upon the entry of the amendments, Claims 1 and 2 are pending in this application. Applicant respectfully requests the entry of the amendments and reconsideration of the application.

Claim Rejections under 35 U.S.C. §103

The Examiner rejected Claim 1 under 35 U.S.C. §103(a) as being unpatentable over Min Heo (KR 10-2002-0085360) in view of Schneider et al. (U.S. 5,807,037) and Kressmann (U.S. Pub. No. 2004/0149729). Applicant respectfully disagrees with the Examiner. However, Applicant has amended Claim 1 to clarify the inventive points of Claim 1 against the cited references.

Prima Facie Case of Obviousness

The Patent and Trademark Office has the burden under section 103 to establish a *prima facie* case of obviousness. In re *Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-87 (Fed. Cir. 1984). To establish a *prima facie* case of obviousness, three basic criteria must be met: first, the prior art reference (or references when combined) must teach or suggest all the claim limitations; second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; finally, there must be a reasonable expectation of success. M.P.E.P. §2143.

Amended Claim 1 (emphasis added)

A sink mounting type dish washer including a drain body mounted at the bottom of a water container, comprising:

a cap which is provided at the upper portion of the drain body and opens and closes the drain body;

an outer body which is detachably combined at the periphery of the drain body and in which a first coil is embedded;

a core which is sealingly embedded in the cap and to the periphery of which a second coil is wound;

an ultrasonic vibrator which is provided at the upper portion of the cap and is connected to the second coil in the cap and is operated by the induction current generated at the second coil by the first coil; and

a controller which is connected to the first coil and supplies electric power to the first coil by the signal inputted from a separate control panel; and

wherein washing function is provided to the conventional sink by inserting the outer body having the first coil around the drain body and replacing a conventional cap with the cap having the core to the periphery of which the second coil is wound.

No Prima Facie Case of Obviousness Has Been Established

Claim 1 is directed to a sink mounting type dish washer, which can be attached to a conventional sink and provides a washing function using an ultrasonic vibration. The inventive features include: i) the ultrasonic vibrator is powered by an induction of first and second coils that are not connected mechanically, but only through induction; ii) the first coil is enclosed in an outer body that can be easily installed around a conventional drain body; and iii) the second coil is directly connected to the ultrasonic vibrator and contained a cap, which is separated mechanically from the rest of the device and can replace an original cap of the conventional sink.

The Examiner stated “Heo teaches... a core embedded in the cap wrapped in a coil (fig. 5, parts 62 and 63, page 3) with an ultrasonic vibrator (fig. 5, part 70, page 3)...”

However, Applicant respectfully submits that the function of the coil (63) around a bobbin (62) is totally different from the second coil (35) in the cap (20) of the present invention. The second coil (35) in the invention is coupled with the first coil (25) by induction to provide an electric power to the ultrasonic vibrator (45), while the Heo’s coil (63) is a solenoid coil for opening and closing a water valve (3).

As the Examiner pointed out from Heo's separable dish washer, the controller (20) provides power directly to the ultrasonic vibrator (70), the water valve (3), and other elements through the cables (5, 6, 7).

Also, the Examiner stated that "It would have been obvious to one having ordinary skill in the art at the time the invention was made to make a direct power source to an indirect power source, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961)."

However, Applicant submits that using induction to power the ultrasonic vibrator is not just "making separable" the power source with other things fully met by the prior art.

Separation of the power source using the first and second coils is essential to enable the inventive points: converting a conventional sink to a sink mounting type dish washer conveniently by inserting the outer body (30) around the drain body (15); and replacing an original cap with the cap (20) containing the ultrasonic vibrator (45) and the first coil (25).

Therefore, the separation of the power source is not only essential to enable the invention, but also causes a lot of change of the structure of the device: i) the outer body (30) is configured to contain the first coil (25) and its shape is configured to be inserted around the drain body (15); and ii) the cap (20) is configured to contain the ultrasonic vibrator (45) and the second coil (35), such that the second coil (35) is coupled with the first coil (25) by induction, the structure and disposition of which is closely related to the other. That is, it is not just a separation of a powered part from a powering part. To accommodate and convert a conventional sink to a dish washer, the invention has used an induction using the first and second coils in ways specific to the invention, which are not taught or suggested by the cited references, Schneider or Kressmann.

More specifically, Schneider discloses an inductive transmission link of the power supply device to the tool head (See, e.g., col. 5, lines 33- 42). The introduction of induction link in the device is not for converting one pre-existing device to other form, as disclosed in the present invention. Therefore, just an introduction of the induction link (pretty old science itself since Faraday) into a device cannot be maintained that it makes all the changes in structure and function obvious.

Kressmann mentioned an induction coupling briefly and does not even show any related structure, and definitely remedy the deficiency of Heo or Schneider.

As discussed, Heo, Schneider, and Kressmann or their combination does not teach or suggest the claimed features of Claim 1. Therefore, the combination does not establish a *prima facie* case of obviousness. Applicant respectfully requests allowance of Claim 1.

Claim Rejections under 35 U.S.C. §103

The Examiner rejected claim 2 under 35 U.S.C. §103(a) as being unpatentable over over Min Heo in view of Schneider and Kressmann, further in view of Segal (U.S. pgpub. 2002/0019709). Applicant respectfully disagrees with the Examiner. However, Applicant has amended Claim 2 to clarify the inventive points.

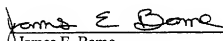
Also, since Segal does not remedy the deficiency of Heo, Schneider, and Kressmann, Applicant respectfully request the withdrawal of the rejection to Claim 2.

Conclusion

In view of the amendments and remarks made above, it is respectfully submitted that claims 1 and 2 are in condition for allowance, and such action is respectfully solicited. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to contact the undersigned attorney at the number listed below.

Respectively submitted,

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James E. Bame
Regis. No. 44521
Tel: 213-384-7200
IPLA P.A.
3580 Wilshire Blvd 17th Fl.
Los Angeles, CA 90010